

A REVISION OF THE NORTHERN FORMS OF *EUPHONIA XANTHOGASTER* (AVES: THRAUPIDAE)

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Abstract.—Analysis of geographic variation in populations of *Euphonia xanthogaster* from Panamá, Colombia, and Venezuela, shows *E. x. chocoensis* to be divisible into a small lowland subspecies, *E. x. chocoensis* Hellmayr, in western Colombia and Ecuador, and a larger upland one, *E. x. oressinoma*, new subspecies, in the western and central Andes and on the western slope of the northern part of the eastern Andes. *E. x. badissima*, new subspecies, from the Sierra Perijá south to the Táchira Valley, and Boyacá, Colombia, is distinguished from *E. x. exsul* Berlepsch of northern Venezuela. *E. x. badissima* and *E. x. oressinoma* intergrade in Santander del Norte, the intergrades having previously been misidentified as *E. x. brevirostris* Bonaparte, which now appears to be unknown north of Cundinamarca in the eastern Andes.

The following revision treats the subspecies of the Orange-bellied Euphonia, *Euphonia xanthogaster*, that occur in Panamá and most of Colombia and Venezuela. I have considered only those populations that have in the past been recognized under the names *chocoensis*, *exsul*, and *brevirostris*. The distribution of these taxa, two new subspecies, and their intergrades, is shown in Fig. 1. The analysis was based mainly on adult male specimens.

Euphonia xanthogaster chocoensis Hellmayr

Euphonia xanthogaster chocoensis Hellmayr 1911, Rev. Franç. d'Orn. 2:23.
Río Cajón, Chocó, Colombia.

Characters.—Small, wing of adult males 60 mm or less (55.8–60.8, average 58.6, n = 16), bill small. Cap yellowish, underparts yellow, only faintly tinged with ochraceous.

Range.—Lowlands of western Colombia west of the Andes, from Chocó south through Nariño into Ecuador at least as far as Esmeraldas and Imbabura.

Specimens examined.—COLOMBIA. CHOCO: Bahia de Solano (1, AMNH); Río Uva mouth, near Río Bojaya (1, AMNH); Río Nuquí, base of Baudó Mountains (6, USNM); Río Jurubidá, Baudó Mountains (3, USNM); El Tambo (6, CM); Potedó (2, CM); Quibdo, Río Atrato (2, CM). VALLE:



Fig. 1. Outline map showing the distribution of the northern forms of *Euphonia xanthogaster* in Colombia, Venezuela, and eastern Panamá, based on specimens examined in this study. Fine lines indicate provincial boundaries; cross-hatched areas indicate elevations above 1000 m.

Malaguita (2, CM); Córdoba (2, CM; 2, ANSP); Punto Muchimbo, just below mouth of Río Calima (1, USNM). CAUCA: Novita, Río San Juan (1, USNM). NARIÑO: Barbacoas (2, AMNH). ECUADOR. ESMERALDAS: Cachabí (4, AMNH). IMBABURA: Lita (1, AMNH).

Remarks.—This is a small form restricted to the lowlands west of the western Andes. Two males from Río Jurubidá in the Baudó Mountains have the wing slightly longer than typical *chocoensis* (61.0, 61.7), but are nevertheless smaller than all but two specimens of the following subspecies.

Euphonia xanthogaster oressinoma, new subspecies

Holotype.—USNM 436904, adult male, Hacienda Sofia, Río Samaná, Caldas, Colombia, elevation 3750 feet (1143 m). Collected 26 May 1951 by M. A. Carriker, Jr., original number 20308.

Characters.—Coloration like that of *chocoensis* but size larger, wing of adult males usually 63 mm or longer (61.0–68.6, average 63.9, $n = 35$), bill noticeably larger.

Range.—Panamá in Darién, and in Colombia on both slopes of the western Andes south at least to Nariño, and the western slope of the central Andes; also known from a widely disjunct locality on the western slope of the eastern Andes in Santander.

Specimens examined.—PANAMA. DARIEN: Río Jaqué, mouth of Río Imamadó (1, USNM); Río Jaqué, Las Peñitas (1, USNM); 9 mi E of Cana (2, USNM); Cerro Pirre (4, USNM); Cerro Sapo (1, ANSP).

COLOMBIA. ANTIOQUIA: Hacienda Potreros, 15 mi (24 km) SW of Frontino, Río Herradura (4, USNM); Valdívia, above Sevilla (3, USNM); La Bodega, N side of Río Negrito on Sonson-Nariño highway (1, USNM); Alto Bonito (1, AMNH). VALLE: Km 18 on Cali-Buenaventura road (1, USNM); Height of Caldas (5, CM); Bitaco Valley (2, CM); La Cumbre (1, CM; 1, ANSP); San Antonio (1, AMNH). CALDAS: Hacienda Sofia, Río Samaná (8, USNM); La Selva (4, ANSP). CAUCA: Cocal, W of Popayán (1, AMNH); E of Palmira (2, AMNH); El Tambo (5, ANSP). NARIÑO: Ricuarte (4, ANSP); Mayasquer (1, ANSP). SANTANDER: Virolin, 28 km S of Charalá (5, USNM).

Etymology.—Greek *oressinomos*, ranging the mountains.

Remarks.—Hellmayr (1936:26) has already noted that birds from the highland portions of the range attributed to *chocoensis* are larger than those from the lowlands. Inasmuch as these are consistently separable, I have chosen to recognize this variation nomenclaturally. Measurements do not adequately convey the noticeably smaller size of *chocoensis*, particularly of the bill. Caution must be used in taking wing measurements because adult males in definitive plumage often retain primaries from the previous subadult plumage, and these consistently give a smaller measurement. Such specimens were eliminated from consideration in the measurements discussed above.

There is some variation within *oressinoma*; birds from Panamá tend to be somewhat darker, more ochraceous below, and those from Caldas are yellowest, but individual variation bridges the differences. The specimens reported here from Virolin in Santander apparently constitute the first record of “*Chocoensis*”-like birds from the eastern Andes and are widely separated from the nearest known population of *oressinoma*. Nevertheless, I cannot distinguish them in any way from topotypes of *oressinoma* from Caldas, although all the specimens from Santander are near the maximum size for the subspecies and would certainly average larger.

I would assume that *oressinoma* ranges into Ecuador, but I have not seen Ecuadorian specimens referable to this subspecies. It is replaced to the south by *quitensis* Nelson, which differs from *oressinoma* in having the cap

more extensive, the cap and underparts more deeply ochraceous, as well as averaging larger. Hellmayr (1936) considered *quitensis* to be doubtfully distinct from *brevirostris* east of the Andes, but the former is a larger bird with a markedly longer bill and a less intensely colored cap.

Euphonia xanthogaster brevirostris Bonaparte

Euphonia brevirostris Bonaparte 1851, Rev. Mag. Zool. 2(3):136. "Columbia" = Bogotá.

Characaters.—Differs from *chocoensis* and *oressinoma* in having the underparts and cap darker, more ochraceous, less yellow. Cap plusher, more velvety, without noticeable dark bases to the feathers, hence mostly unspotted. Bill smaller than in *oressinoma*.

Range.—In Colombia found on the eastern slope of the eastern Andes from Cundinamarca southward, and on the southern end of the eastern slope of the central Andes in Huila. The stated range also includes eastern Ecuador and Peru, southern Venezuela, the Guianas, and northwestern Brazil.

Specimens examined.—COLOMBIA. CUNDINAMARCA: "Bogotá" (6, USNM); vicinity of Bogotá (1, USNM); near Quetame (1, AMNH). META: Buena Vista (1, ANSP); Mt. Macarena (2, AMNH). CAQUETA: Río Caquetá (1, USNM); La Murelia [=Morelia], Río Bodoquera (1, USNM; 3, AMNH; 1, ANSP); Florencia (1, AMNH). PUTUMAYO: Río Rumiayaco (2, ANSP); Río Churo Yacu (3, ANSP). NARIÑO: Río San Miguel (5, ANSP). HUILA: La Candela, 10 mi (16 km) SW of San Agustín (8, USNM; 1, AMNH; 16, ANSP); Belen, 45 km SW of La Plata (3, USNM), La Palma (1, AMNH); Caquetá Trail (1, AMNH); El Isno (1, ANSP). Specimens from elsewhere in the range were examined but not studied in detail.

Remarks.—Records of this subspecies from Santander del Norte (Meyer de Schauensee, 1951) are erroneous, being based on intergrades between *E. x. oressinoma* and *E. x. badissima* (*q.v.*). Thus there appears to be no evidence that this subspecies occurs any farther north in the eastern Andes than the Bogotá region.

Euphonia xanthogaster exsul Berlepsch

Euphonia xanthogaster exsul Berlepsch 1912, Verh. V Intern. Ornith. Kongr. Berlin 1911, p. 1017. San Esteban, near Puerto Cabello, Carabobo, Venezuela.

Characters.—Markedly distinct from any of the preceding subspecies. Adult males with cap rich orangish chestnut; breast and midline of belly very deep fulvous, almost chestnut. Females much buffier on breast and undertail coverts, cap suffused with chestnut, not yellowish.

Range.—Mountains of northern Venezuela from Lara east to Miranda.

Specimens examined.—VENEZUELA. LARA: mountains near Bucarito, Tucuyo (1, AMNH). YARACUY: Lagunita de Aroa (1, CM); Aroa, Bolivar RR (1, CM). CARABOBO: San Esteban, inland of Puerto Cabello (2, AMNH); La Cumbre de Valencia (1, CM); La Cumbre (1, CM); Las Quigas (2, CM). ARAGUA: Rancho Grande (2, USNM). DISTRITO FEDERAL: El Limón (1, USNM; 2, CM). MIRANDA: Santa Lucia (1, USNM; 1, CM). ?MONAGAS: Caripé (1, AMNH) [Hellmayr (1936) questioned the provenance of this specimen and I have not included the locality in Fig. 1].

Remarks.—Birds from the Sierra Perijá, Santander del Norte, and Boyacá, previously referred to *exsul*, belong to the following new subspecies.

Euphonia xanthogaster badissima, new subspecies

Holotype.—USNM 375042, adult male, Bellavista, “pumping station 100 km from Petrolea” [=65 km NW of Petrolea as marked on map of Carriker localities on file at USNM], Santander del Norte, Colombia. Collected 4 July 1943 by M. A. Carriker, Jr., original number 4595.

Characters.—Like *exsul* but adult males with chestnut of cap darker, less orangish, fulvous portions of underparts darker and somewhat more extensive. In females the cap is darker and more restricted than in *exsul*. Males are very similar to the widely disjunct *ruficeps* Lafresnaye and D’Orbigny 1834 of Bolivia; they do not differ in the color of the cap but are more extensively and deeper fulvous below.

Range.—Colombia in the Sierra Perijá area of Magdalena, south to Santander del Norte, including the Táchira Valley, and on the east slope of the eastern Andes in Boyacá.

Specimens examined.—COLOMBIA. MAGDALENA: Monte Elias, Sierra Negra, SE of Fonseca (1, USNM); Tierra Nueva, Sierra Negra, SE of Fonseca (1, USNM). SANTANDER DEL NORTE: Palo Gordo, 10 mi (16 km) SE of Villa Felisa, Táchira Valley (1, USNM); Bellavista, 65 km NW of Petrolea (3, USNM). BOYACA: Río Negro (2, CM).

Etymology.—“Most chestnut,” from Latin *badius*, chestnut brown, and *-issimus*, an adjectival superlative.

Remarks.—A male and female from Río Negro, Boyacá, are clearly more similar to *badissima* than to *exsul*, although the underparts of the male are lighter than in the other specimens of *badissima*.

Euphonia xanthogaster oressinoma × *Euphonia xanthogaster badissima*

Characters.—Underparts and cap of adult males more ochraceous than in *oreassinoma* but not nearly as dark as in *badissima*. Superficially somewhat similar to *brevirostris*, but cap not plush and velvety, with bases of feathers darker, giving a spotted appearance; bill larger.

Range.—Western slope of the eastern Andes of Colombia in Magdalena and Santander del Norte, west of Ocaña.

Specimens examined.—COLOMBIA. MAGDALENA: La Palmita (1, ANSP; 4, CM; 2, USNM). SANTANDER DEL NORTE: Ocaña, beyond Pueblo Nuevo (1, USNM); Pueblo Nuevo (1, ANSP).

Remarks.—These birds had previously been identified as *brevirostris* (Meyer de Schauensee, 1951), but they are clearly intergrades between the two disparate subspecies listed above, whereas the nearest known occurrence of *brevirostris* is from far to the south, on the other side of the eastern Andes. All of the intergrades come from a rather limited area west of Ocaña. The male labelled "beyond Pueblo Nuevo" comes from slightly farther to the east than those from Palmita and has a darker crown, hence tending more towards *badissima*. The specimen labelled simply "Pueblo Nuevo," however, looks like those from Palmita.

Acknowledgments

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Note added in proof: The record of *Euphonia xanthogaster* from El Real, Darien, Panama, reported *vide* Wetmore in Haffer (1975, Bonner Zoologische Monographien 7:158–9), was based on a specimen that I have re-identified as *E. luteicapilla* (USNM 484881); this happens to be the easternmost record of the species.